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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/808,875	03/15/2001	Christopher J. Edge	I0275US01	5572

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EXAMINER
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HARRISON, CHANTE E

ART UNIT	PAPER NUMBER
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2672

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DATE MAILED: 03/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/808,875	<b>Applicant(s)</b> EDGE, CHRISTOPHER J.	
	<b>Examiner</b> Chante Harrison	<b>Art Unit</b> 2672	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This action is responsive to communications: Amendment A, filed on 1/9/04.

***This action is made FINAL.***

2. Claims 1-43 are pending in the case. Claims 1, 9, 16, 23, 28, 30-31, 35, 37, 38, 41 and 43 are independent claims. Claims 1, 7, 9, 16, 23, 27-28, 30-32, 34-35, 37-39, 41 and 43 have been amended.

### ***Drawings***

1. The proposed drawing corrections and/or the proposed substitute sheets of drawings, filed on 1/9/04 have been approved by Examiner. Thus, the objection to the drawings for including and/or not including reference signs mentioned in the description is withdrawn.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-13, 16-43 rejected under 35 U.S.C. 102(e) as being anticipated by Jonathan Marsden et al., U.S. Patent 6,340,975 B2, January 2002.

As per independent claim 1, Marsden discloses a method comprising: obtaining a white point correction for a display device (col. 12, ll. 12-18); obtaining a chromatic correction for the display device (col. 12, ll. 10-18); and generating corrected device-independent color coordinates for the display device based on device-independent coordinates associated with a hard copy the white point correction and chromatic corrections (col. 12, ll. 10-44; col. 5, ll. 1-10, 60-65; Fig. 6; col. 6, ll. 5-10).

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As per dependent claim 2, Marsden discloses obtaining the white point correction by determining a white point correction matrix (col. 2, ll. 40-61; col. 8 ll. 10-20); and obtaining the chromatic correction by determining a chromatic correction matrix (col. 2, ll. 40-61; col. 8, ll. 5-15).

As per dependent claims 3 and 21, Marsden discloses displaying a color on a display device (Fig. 6), the color being defined by an original white point matrix in a -D50 illuminant condition (col. 7, ll. 48-61); and adjusting at least some white point matrix values so that visual appearance on the display device is visually equivalent to a print (col. 12, ll. 10-18).

As per dependent claim 4, Marsden discloses adjusting at least some white point matrix values comprises adjusting maximum phosphor settings on a display (col. 8, ll. 10-40; col. 12, ll. 12-18).

As per dependent claims 5 and 22, Marsden discloses determining a chromatic correction matrix comprises: displaying a color on a display device (Fig. 6), the color being defined by an original chromatic matrix in a D50 illuminant condition (col. 7, ll. 48-62); and adjusting at least some chromatic matrix values so that visual appearance on the display device is visually equivalent to a print (col. 8, ll. 30-40).

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As per dependent claim 6,26, 33 and 40, Marsden discloses adjusting at least some chromatic matrix values comprises adjusting chromaticity values in an RGB color space (col. 7, ll. 48-61; col. 8, ll. 30-40).

As per dependent claims 7, 27 and 34, Marsden discloses adjusting chromaticity values in an RGB color space comprises adjusting chromaticity values in an AdobeRGB(d50) color space (col. 7, ll. 49-52; col. 8, ll. 30-40).

As per dependent claim 8, Marsden discloses generating corrected color coordinates based on the white point and chromatic corrections comprises generating a single correction matrix (col. 2, ll. 45-61; col. 8).

As per independent claim 9, Marsden discloses a method comprising: determining device-independent coordinates defining a color on a hard copy (col. 6, ll. 40-50); and generating corrected device-independent coordinates using the determined device-independent coordinates, a white point correction and a chromatic correction (col. 5, ll. 1-10; col. 12, ll. 10-44).

As per dependent claims 10 and 17, Marsden discloses displaying the color using the corrected coordinates (col. 5, ll. 1-10).

As per dependent claims 11, 18 and 42, Marsden discloses the displayed color is visually equivalent to the color on the hard copy (col. 12, ll. 10-18; col. 13, ll. 44-47).

As per dependent claims 12 and 19, Marsden discloses the white point correction is a white point correction matrix (col. 8, ll. 10-20) and the chromatic correction is a chromatic correction matrix (col. 2, ll. 45-61; col. 8, ll. 30-40; col. 12, ll. 10-18).

As per dependent claims 13 and 20, Marsden discloses determining the white point correction matrix (i.e. gamma function) (col. 8, ll. 10-15) and the chromatic correction matrix (i.e. xyz values) (col. 8, ll. 10-15).

As per independent claim 16, Marsden discloses a method comprising: converting device-dependent coordinates that define a color in a printing device to device-independent coordinates (col. 5-6, ll. 67-5; Fig. 6); adjusting the device-independent coordinates using a white point correction and a chromatic correction (col. 5, ll. 1-10; col. 11, ll. 35-37, 57-65; col. 12, ll. 10-44); and converting the corrected device-independent coordinates to device-dependent coordinates that define a color in a display device (col. 5-6, ll. 67-5; col. 5, ll. 1-10; col. 11, ll. 35-37, 57-65; col. 12, ll. 30-44; Fig. 6). It is inherent that Marsden's disclosure of the use of a profile that contains transformation data that includes converting from device dependent coordinates to device-independent coordinates and vice versa enables the printing device having device dependent coordinates to convert its coordinates to those of the device dependent display monitor using the intermediate adjustments of the white point

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and chromaticities to achieve soft proofing (col. 10, ll. 39-46) in the disclosed system (Fig. 6), which illustrates a bi-directional feed of data between the printing and display devices and implements a lookup table (Fig. 6 "204a") storing the adjusted white point and chromaticity values.

As per independent claim 23, Marsden discloses a method comprising: adjusting maximum phosphor values for a display device based on device-independent coordinates so that a first color displayed on the display device matches white in a defined illuminant condition for a hard copy (col. 7, ll. 49-52; col. 8, ll. 30-40); and adjusting color settings based on the corrected device-independent coordinates so that a second color displayed on the display device matches a defined color in the defined illuminant condition (col. 7, ll. 49-52; col. 12, ll. 10-18; Fig. 9).

As per dependent claims 24, 32 and 39, Marsden discloses the defined illuminant condition is a D50 illuminant condition (col. 7, ll. 48-52).

As per dependent claim 25, Marsden discloses adjusting color settings comprises adjusting color settings within a computer program (col. 10, ll. 15-20; col. 12, ll. 4-18).

As per independent claim 28, Marsden discloses a method comprising: creating a first visual representation of an image on a hard copy (col. 5, ll. 60-65); and creating a second visual representation of the image on a display device including adjusting



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device-independent coordinates (col. 10, ll. 40-45; Fig. 9), wherein the first visual representation and the second visual representation have different device-independent coordinates (col. 5, ll. 61-64; col. 6, ll. 41, 44-50; col. 11, ll. 48-61; col. 12, ll. 10-15, 37-42), and wherein both white point and saturated colors on the display device are a good visual match to those of the hard copy (col. 12, ll. 4-18, 46-50; col. 13, ll. 44-47).

As per dependent claims 29 and 36, Marsden discloses both white point and saturated colors on the display are visually equivalent to those of the hard copy (col. 8, ll. 30-40; col. 12, ll. 10-18).

As per independent claim 30, Marsden discloses a system comprising: a display device (Fig. 6 "209"); a memory device (Fig. 6 "210"); and a processor coupled to the memory device and the display (Fig. 6 "205"), wherein the processor: obtains a white point correction for the display device from the memory device (col. 5, ll. 1-3; col. 8, ll. 30-35); obtains a chromatic correction for the display device from the memory device (col. 5, ll. 1-3; col. 8, ll. 30-35); and generates corrected device-independent color coordinates for the display device based on device-independent coordinates associated with a hard copy the white point and chromatic corrections (col. 12, ll. 10-44; Fig. 6; col. 5, ll. 60-65; col. 6, ll. 5-10).

As per independent claim 31, Marsden discloses a system comprising: a display device (Fig. 6 "209"); a memory device (Fig. 6 "210"); and a processor coupled to the display

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device and the memory device (Fig. 6 "205"), wherein the processor: adjusts the maximum phosphor values of the display device based on corrected device-independent coordinates so that a first color displayed on the display device matches white in a defined illuminant condition for a hard copy (col. 7, ll. 49-52; col. 8, ll. 30-40); and adjusts color settings based on the corrected device-independent coordinates so that a second color displayed on the display device matches a defined color in the defined illuminant condition (col. 7, ll. 49-52; col. 12, ll. 10-18; Fig. 9).

As per independent claim 35, Marsden discloses a system comprising: a display device (Fig. 6 "209"); a memory device (Fig. 6 "210"); and a processor coupled to the display device and the memory device (Fig. 6 "205"), wherein the processor: receives a first set of image data from the memory device defining a first visual representation of an image on a hard copy (col. 4-5, ll. 67-4; col. 10, ll. 38-44); creates a second set of image data defining a second visual representation of the image for display on the display device including adjusting first device-independent coordinates associated with the first set of image data to generate second device-independent coordinates associated with the second set of image data (col. 12, ll. 10-44; col. 11, ll. 48-61; col. 12, ll. 10-15, 37-42); and displays the image on the display (col. 10, ll. 43-45), and wherein both white point and saturated colors of the image on the display are a good visual match to those of the hard copy (col. 12, ll. 4-18, 46-50; col. 13, ll. 44-47).

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As per independent claim 37, Marsden discloses a computer readable medium carrying program code that when executed: receives a white point correction for a display device as input (col. 8, ll. 30-35); receives a chromatic correction for the display device as input (col. 8, ll. 30-35); and generates corrected color coordinates for the display device based on the white point and chromatic corrections (col. 12, ll. 10-44; Fig. 6; col. 5, ll. 60-65; col. 6, ll. 5-10).

As per independent claim 38, Marsden discloses a computer readable medium carrying program code that when executed: adjusts maximum phosphor values of a display device based on corrected device-independent coordinates so that a first color displayed on the display device matches white in a defined illuminant condition for a hard copy (col. 7, ll. 49-52; col. 8, ll. 30-40); and adjusts color settings based on the corrected device-independent coordinates so that a second color displayed on the display device matches a defined color in the defined illuminant condition (col. 7, ll. 49-52; col. 12, ll. 10-18; Fig. 9).

As per independent claim 41, Marsden discloses a computer readable medium carrying program code that when executed: receives a first set of image data from the memory device defining a first visual representation of an image on a hard copy (col. 10, ll. 38-42); creates a second set of image data defining a second visual representation of the image for display on the display device including adjusting first device-independent coordinates associated with the first set of image data to generate second device-

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independent coordinates associated with the second set of image data (col. 12, ll. 10-44; col. 11, ll. 48-61; col. 12, ll. 10-15, 37-42); and displays the image on the display (col. 10, ll. 43-45); and wherein both white point and saturated colors of the image on the display are a good visual match to those of the hard copy (col. 12, ll. 4-18, 46-50; col. 13 ll. 44-47).

As per independent claim 43, Marsden discloses a computer readable medium carrying a color profile data structure thereon, the color profile data structure corresponding to a display device (col. 5, ll. 65-67) and including illuminant condition values that do not correspond to actual illuminant conditions associated with the display device (col. 7, ll. 15-18), such that colors rendered on the display device using the color profile data structure are visually equivalent to colors rendered on a printing (col. 5, ll. 61-64; col. 7, ll. 39-42; col. 6, ll. 5-10).

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marsden as applied to claim 9 above, and further in view of Patrick Cottone, U.S. Patent 6,522,313 B1, February 2003.

As per dependent claim 14, Marsden discloses displaying a color on a display device (Fig. 6), the color being defined by an original white point matrix in a D50 illuminant condition (col. 7, ll. 49-52; col. 8, ll. 10-20); and adjusting at least some white point matrix values so that visual appearance on the display device is visually equivalent to a white printout (col. 12, ll. 10-18). Marsden fails to specifically disclose the printout viewed in the D50 illuminant condition, which Cottone discloses (col. 4, ll. 17-29). It would have been obvious to one of skill in the art to include Cottone's teaching of viewing a printout in the D50 illuminant condition with Marsden's disclosure of applying an illuminant to a display monitor and manipulating color data under the known illuminant for the benefit of creating an environment where the printout and the display data are viewed under the same conditions so as to produce colors that closely resemble the intended colors (col. 7, ll. 49-55; col. 13, ll. 43-46).

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As per dependent claim 15, Marsden discloses displaying a color on a display device (Fig. 6), the color being defined by an original chromatic matrix in a D50 illuminant condition (col. 7, ll. 49-61); and adjusting at least some chromatic matrix values (col. 7-8, ll. 61-15) so that visual appearance on the display device is visually equivalent to a color printout (col. 8, ll. 30-40). Marsden fails to specifically disclose the printout viewed in the D50 illuminant condition, which Cottone discloses (col. 4, ll. 17-29). It would have been obvious to one of skill in the art to include Cottone's teaching of viewing a printout in the D50 illuminant condition with Marsden's disclosure of applying an illuminant to a display monitor and manipulating color data under the known illuminant for the benefit of creating an environment where the printout and the display data are viewed under the same conditions so as to produce colors that closely resemble the intended colors (col. 7, ll. 49-55; col. 13, ll. 43-46).

***Response to Arguments***

3. Applicant's arguments filed 1/9/04 have been fully considered but they are not persuasive.

Applicant argues (pp. 16, Para 4) Marsden fails to perform the conversion from a device-independent coordinates to corrected or adjusted device-independent coordinates as do amended independent claims as indicated by Applicant's arguments (pp. 14-16); and performing the conversion using a white point correction and a chromatic correction.

In response, Marsden teaches transforming input device-dependent values to XYZ device-independent values and further transforming XYZ device-independent values to LAB device-independent values before finally transforming the thus transformed values to final output color values (Fig. 9; col. 7-8, ll. 49-67; col. 11-12, ll. 56-10). Thus, the transformation of XYZ device-independent values to LAB device-independent values represents an adjustment of initial device-independent values to adjusted device-independent values. Marsden further discloses using a

Applicant argues (pp. 17, Para 1) Marsden fails to disclose the use of correction matrices in order to perform the conversion from a device-independent coordinates to corrected or adjusted device-independent coordinates.

In response, Marsden discloses a transformation matrix,  $f$  (col. 8, ll. 10-15), which is used to convert from one device-independent coordinate, XYZ, to a second adjusted device-independent coordinate, LAB.

Applicant argues (pp. 16, Para 5), Marsden fails to disclose the limitations as claimed in dependent claims.

In response, Examiner asserts that Marsden discloses the limitations as claimed in dependent claims as indicated by the corresponding citations to Marsden's specification.

Therefore, the rejection in view of Marsden is maintained.

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the



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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

**Conclusion**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chante Harrison whose telephone number is 703-305-3937. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on 703-305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chante Harrison  
Examiner  
Art Unit 2672

March 12, 2004



MICHAEL RAZAVI  
SUPERVISORY PATENT EXAMINER  
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